RF MEASUREMENT REPORT

FCC ID:	DD4ADXR
Applicant:	Shure Incorporated
Product:	Wireless Bodypack Receiver
Regulatory Model Number (RMN):	ADXR
Product Number:	ADXR-A, ADXR-B, ADXR-C
Brand Name:	SHURE, SHURE
FCC Classification:	Digital Transmission System (DTS)
FCC Rule Part(s):	Part 15 Subpart C (Section 15.247)
Result:	Complies
Received Date:	2024-05-20
Test Date:	2024-06-25 ~ 2024-07-23

Reviewed By: Jame Yuan

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.
This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.
The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

Revision History

Report No.	Version	Description	Issue Date	Note
2405RSU017-U1	V01	Initial Report	2024-08-08	Valid

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1. General Information

1.1. Applicant

Shure Incorporated

5800 West Touhy Avenue, Niles, IL 60714-4608, USA

1.2. Manufacturer

Shure Incorporated

5800 West Touhy Avenue, Niles, IL 60714-4608, USA

1.3. Testing Facility

☒	**Test Site – MRT Suzhou Laboratory**
	Laboratory Location (Suzhou - Wuzhong) D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China **Laboratory Location (Suzhou - SIP)** 4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China **Laboratory Location (Suzhou - Wujiang)** Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China
	Laboratory Accreditations
	A2LA: 3628.01 CNAS: L10551 FCC: CN1166 ISED: CN0001 VCCI: ☐R-20025 ☐G-20034 ☐C-20020 ☐T-20020 ☐R-20141 ☐G-20134 ☐C-20103 ☐T-20104
☐	**Test Site – MRT Shenzhen Laboratory**
	Laboratory Location (Shenzhen) 1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China
	Laboratory Accreditations
	A2LA: 3628.02 CNAS: L10551 FCC: CN1284 ISED: CN0105
☐	**Test Site – MRT Taiwan Laboratory**
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)
	Laboratory Accreditations
	TAF: 3261 FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	Wireless Bodypack Receiver
Regulatory Model Number (RMN)	ADXR
Product Number	ADXR-A, ADXR-B, ADXR-C
Serial No.	2DD26333014
Software Version	0.5.1.0
ZigBee Specification	802.15.4
Microphone Specification	Receive Only
Antenna Information	Refer to Section 1.5
Power Type	SB910 Li-ion battery or AAA battery via battery sled
Operating Environment	Indoor Use
Accessory	
Rechargeable Li-ion Battery	Model: SB910 Output: 3.6V ⎓ 2200mAh, 7.92Wh
Note: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification under Test

Zigbee Specification	802.15.4
Frequency Range	2405 ~ 2480MHz
Channel Number	16
Type of Modulation	O-QPSK
Antenna Type	PIFA Antenna
Antenna Gain	Antenna A: 1.30dBi Antenna B: 1.30dBi

Note: The EUT can transmit Zigbee with Antenna A or Antenna B, and Antenna B output power are the worst, so this report reports Antenna B complete datas, only the output power and worst case radiation data of antenna A are represented.

1.6. Working Frequencies

Channel	Frequency	Channel	Frequency	Channel	Frequency
11	2405 MHz	12	2410 MHz	13	2415 MHz
14	2420 MHz	15	2425 MHz	16	2430 MHz
17	2435 MHz	18	2440 MHz	19	2445 MHz
20	2450 MHz	21	2455 MHz	22	2460 MHz
23	2465 MHz	24	2470 MHz	25	2475 MHz
26	2480 MHz	--	--	--	--

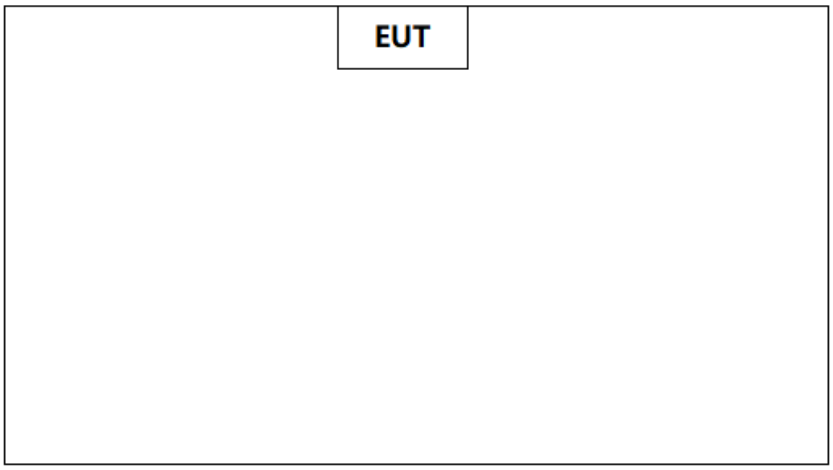
2. Test Configuration

2.1. Test Mode

Mode 1: Transmit by 802.15.4

2.2. Test System Connection Diagram

The device was tested per the guidance ANSI C63.10: 2013 was used to reference the appropriate EUT setup for radiated emissions testing.

Connection Diagram – Radiated Emission testing


2.3. Test Software

The test utility software used during testing was “Tera Term” , and and the version was 4.103.

2.4. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15.247
- KDB 558074 D01v05r02
- ANSI C63.10-2013

2.5. Test Environment Condition

Ambient Temperature	15 ~ 35°C
Relative Humidity	20 ~ 75%RH

3. Antenna Requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section."

- The antenna of the device is **permanently attached.**
- There are no provisions for connection to an external antenna.

Conclusion:

The unit complies with the requirement of §15.203.

4. Measuring Instrument

Instrument	Manufacturer	Model No.	Asset No.	Cali. Interval	Cali. Due Date	Test Site
TRILOG Antenna	Schwarzbeck	VULB 9162	MRTSUE06022	1 year	2025-04-17	WZ-AC2
EMI Test Receiver	Agilent	N9038A	MRTSUE06125	1 year	2025-05-08	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9120D	MRTSUE06171	1 year	2024-10-11	WZ-AC2
Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06176	1 year	2025-05-06	WZ-AC2
Anechoic Chamber	RIKEN	WZ-AC2	MRTSUE06213	1 year	2025-04-18	WZ-AC2
Thermohygrometer	testo	608-H1	MRTSUE11263	1 year	2024-11-07	WZ-AC2
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06597	1 year	2024-11-04	WZ-AC2
Preamplifier	EMCI	EMC184045SE	MRTSUE06640	1 year	2025-01-11	WZ-AC2
Active Loop Antenna	Schwarzbeck	FMZB 1519-60 D	MRTSUE07076	1 year	2024-12-04	WZ-AC2
Thermohygrometer	testo	608-H1	MRTSUE06402	1 year	2025-05-12	WZ-SR5
USB Power Sensor	Keysight	U2021XA	MRTSUE06446	1 year	2025-05-08	WZ-SR5
Shielding Room	HUAMING	WZ-SR5	MRTSUE06442	N/A	N/A	WZ-SR5
Attenuator	MVE	MVE2213	MRTSUE11088	1 year	2025-06-05	WZ
Signal Analyzer	Keysight	N9010B	MRTSUE06457	1 year	2025-05-08	WZ-SR5

Software	Version	Function
e3	19910a	Bandedge & RSE
Controller_MF 7802	1.02	RE Antenna & Turntable
BenchVue Power Meter	2018.1	Power

5. Decision Rules and Measurement Uncertainty

5.1. Decision Rules

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4: 2012 Clause 8.2.

(Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.2. Measurement Uncertainty

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

AC Conducted Emission Measurement
The maximum measurement uncertainty is evaluated as: 9kHz~150kHz: 3.58dB 150kHz~30MHz: 3.20dB
Radiated Emission Measurement
The maximum measurement uncertainty is evaluated as: Coaxial: 9kHz~30MHz: 2.61dB Coplanar: 9kHz~30MHz: 2.62dB Horizontal: 30MHz~200MHz: 3.79dB 200MHz~1GHz: 3.91dB 1GHz~40GHz: 4.99dB Vertical: 30MHz~200MHz: 4.06dB 200MHz~1GHz: 5.21dB 1GHz~40GHz: 4.90dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.2dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.4dB
Power Spectrum Density
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.2dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 2.7%

6. Test Result

6.1. Summary

FCC Section(s)	Test Description	Test Condition	Verdict
15.247(a)(2)	6dB Bandwidth	Conducted	Pass
15.247(b)(3)	Output Power		Pass
15.247(e)	Power Spectral Density		Pass
15.247(d)	Band Edge / Out-of-Band Emissions		Pass
15.205 15.209	General Field Strength (Restricted Bands and Radiated Emission)	Radiated	Pass
15.207	AC Conducted Emissions 150kHz - 30MHz	Line Conducted	N/A

Notes:

1. The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
2. For radiated emission tests, every axis (X, Z) was also verified. The test results shown in the following sections represent the worst-case emissions.
3. “N/A” means that the test item is not applicable, and the detailed information refers to relevant section.

6.2. 6dB Bandwidth Measurement

6.2.1. Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

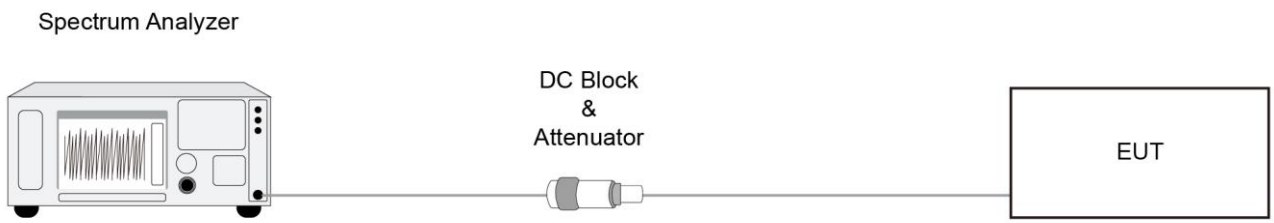
6.2.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.8

6.2.3. Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to X = 6. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set RBW = 100 kHz
3. VBW ≥ 3 × RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize

6.2.4. Test Setup



6.2.5. Test Result

Refer to Appendix A.2.

6.3. Output Power Measurement

6.3.1. Test Limit

The maximum output power shall be less 1 Watt (30dBm).

The conducted output power limit specified in paragraph FCC Part 15.247(b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs FCC Part 15.247(b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.3.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.9.2.3.2

6.3.3. Test Setting

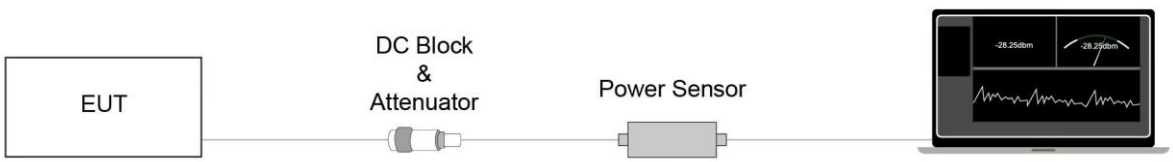
Method PKPM1 (Peak Power Measurement of Signals with DTS BW ≤ 50MHz)

Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The pulse sensor employs a VBW = 50MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50MHz.

Average Power Measurement

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

6.3.4. Test Setup



6.3.5. Test Result

Refer to Appendix A.3.

6.4. Power Spectral Density Measurement

6.4.1. Test Limit

The maximum permissible power spectral density is 8dBm in any 3 kHz band.

The same method of determining the conducted output power shall be used to determine the power spectral density.

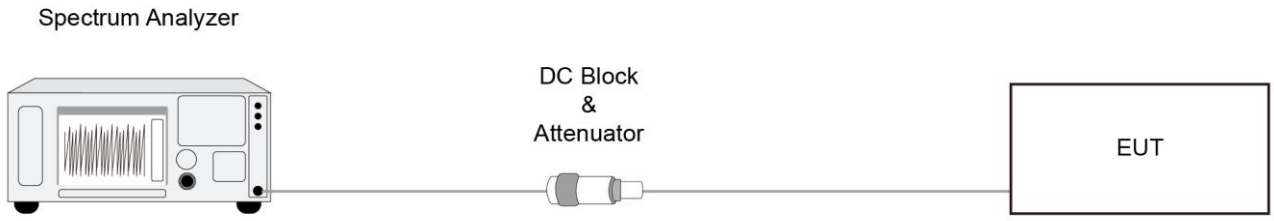
6.4.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.10.2

6.4.3. Test Setting

1. Analyzer was set to the center frequency of the DTS channel under investigation
2. Span = 1.5 times the DTS channel bandwidth
3. RBW = 3kHz
4. VBW = 10kHz
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Trace was allowed to stabilize

6.4.4. Test Setup



6.4.5. Test Result

Refer to Appendix A.4.

6.5. Conducted Band Edge and Out-of-Band Emissions Measurement

6.5.1. Test Limit

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

6.5.2. Test Procedure

ANSI C63.10-2013 - Section 11.11

6.5.3. Test Settitng

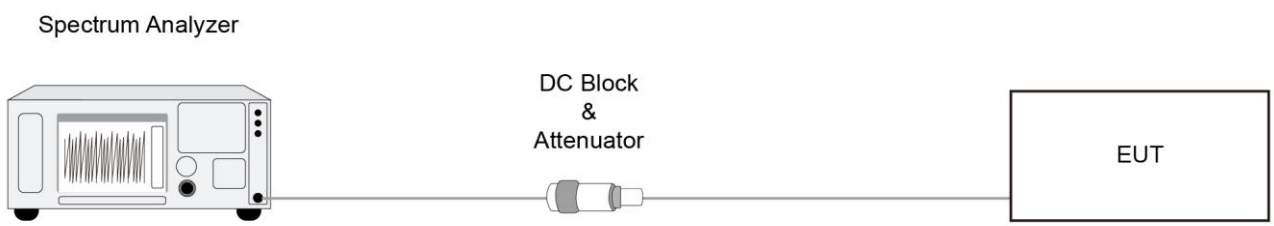
Reference level measurement

1. Set instrument center frequency to DTS channel center frequency
2. Set the span to ≥ 1.5 times the DTS bandwidth
3. Set the RBW = 100 kHz
4. Set the VBW ≥ 3 x RBW
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Allow trace to fully stabilize

Emission level measurement

1. Set the center frequency and span to encompass frequency range to be measured
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

6.5.4. Test Setup



6.5.5. Test Result

Refer to Appendix A.5.

6.6. Radiated Spurious Emission Measurement

6.6.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.6.2. Test Procedure

ANSI C63.10 - 2013 - Section 11.11 & 11.12

ANSI C63.10 - 2013 - Section 6.3 (General Requirements)

ANSI C63.10 - 2013 - Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 - 2013 - Section 6.5 (Standard test method above 30MHz to 1GHz)

ANSI C63.10 - 2013 - Section 6.6 (Standard test method above 1GHz)

6.6.3. Test Setting

Table 1 - RBW as a function of frequency

Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000MHz	1MHz

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

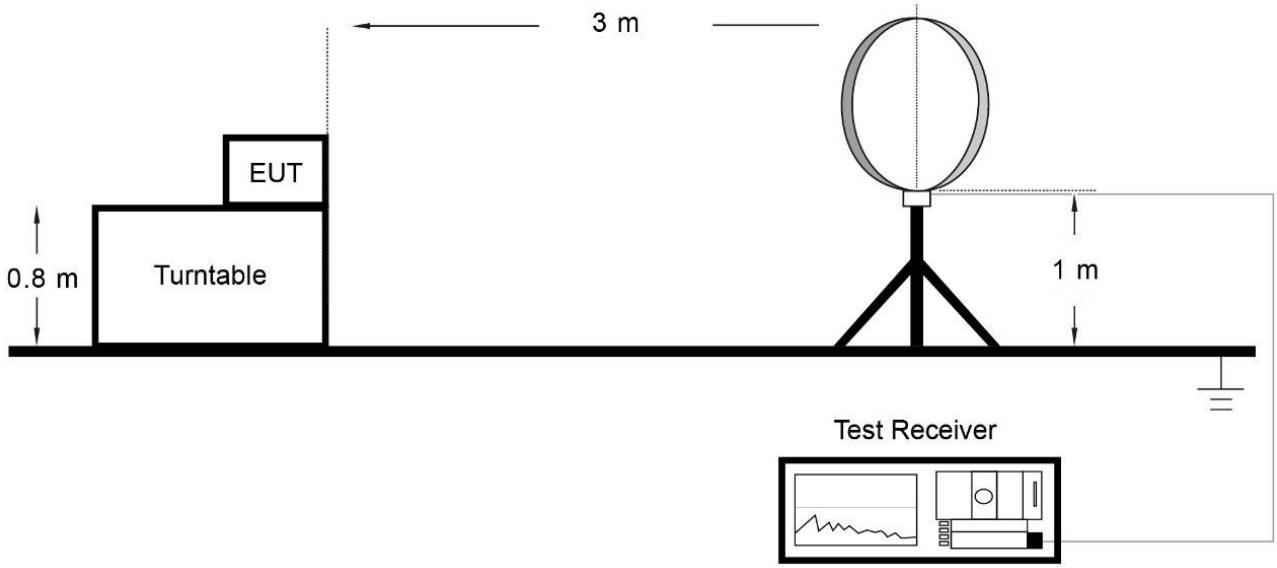
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

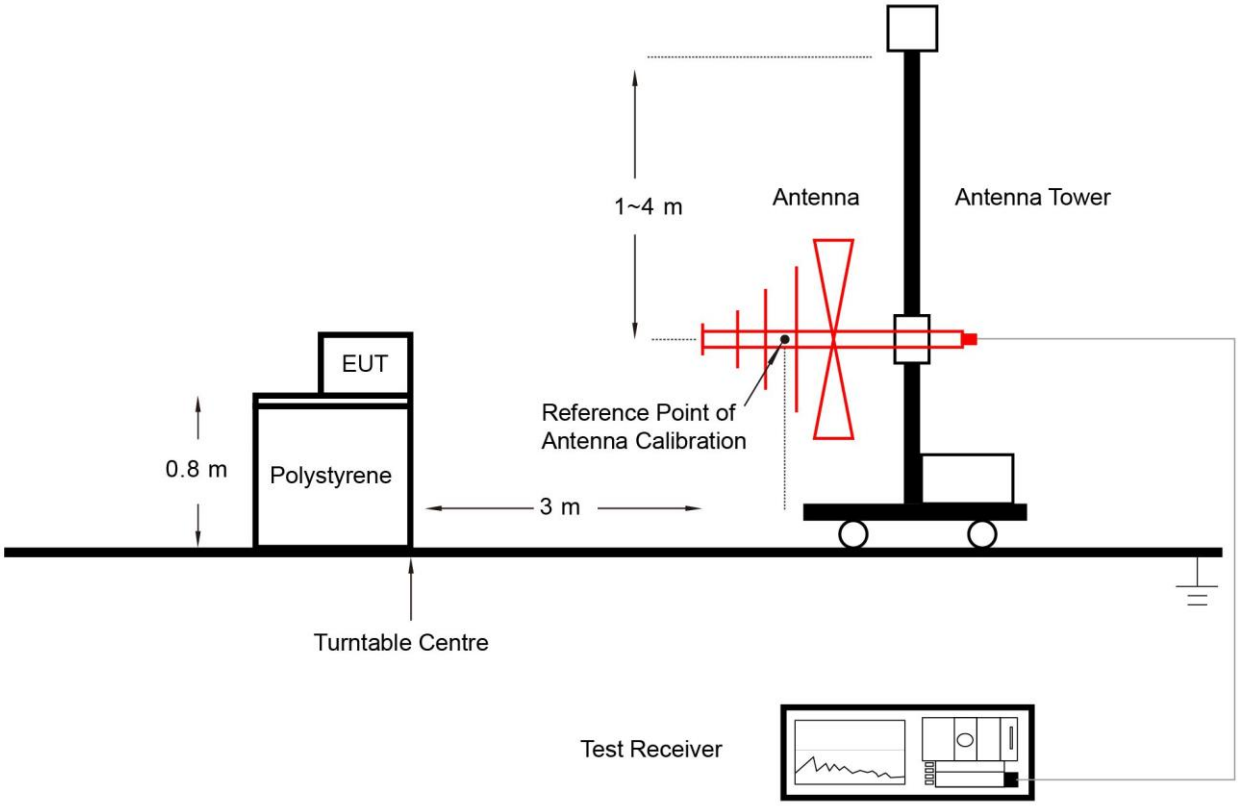
1. Average Measurement Level = Peak Measurement Level - 20 * Log(Duty Cycle) = -38.33
2. Duty Cycle = 1.21%(refer to ADXR Duty Cycle Report)

6.6.4. Test Setup

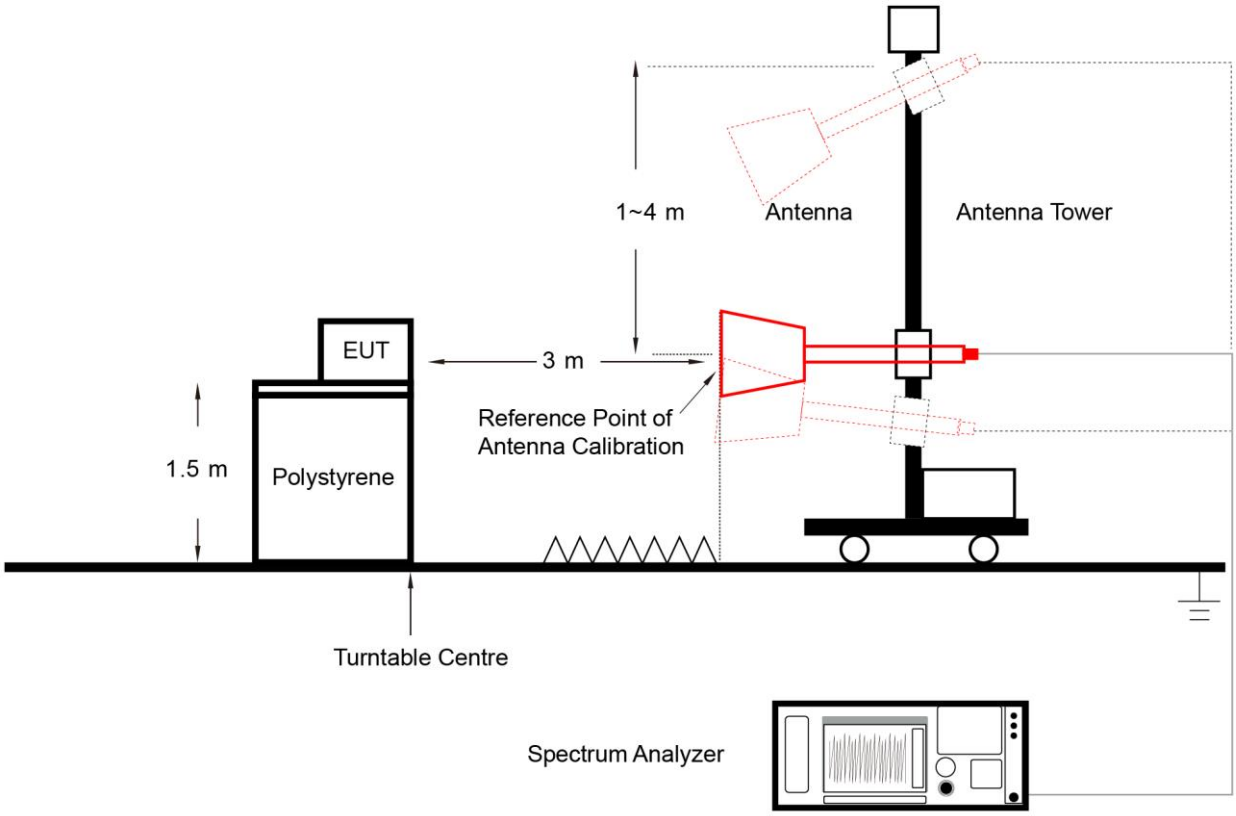
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



6.6.5. Test Result

Refer to Appendix A.6.

6.7. Radiated Restricted Band Edge Measurement

6.7.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1] 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])
13.36 - 13.41	--	--	--

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [uV/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

6.7.2. Test Procedure

ANSI C63.10-2013 Section 6.3 & 6.6 & 11.13

6.7.3. Test Setting

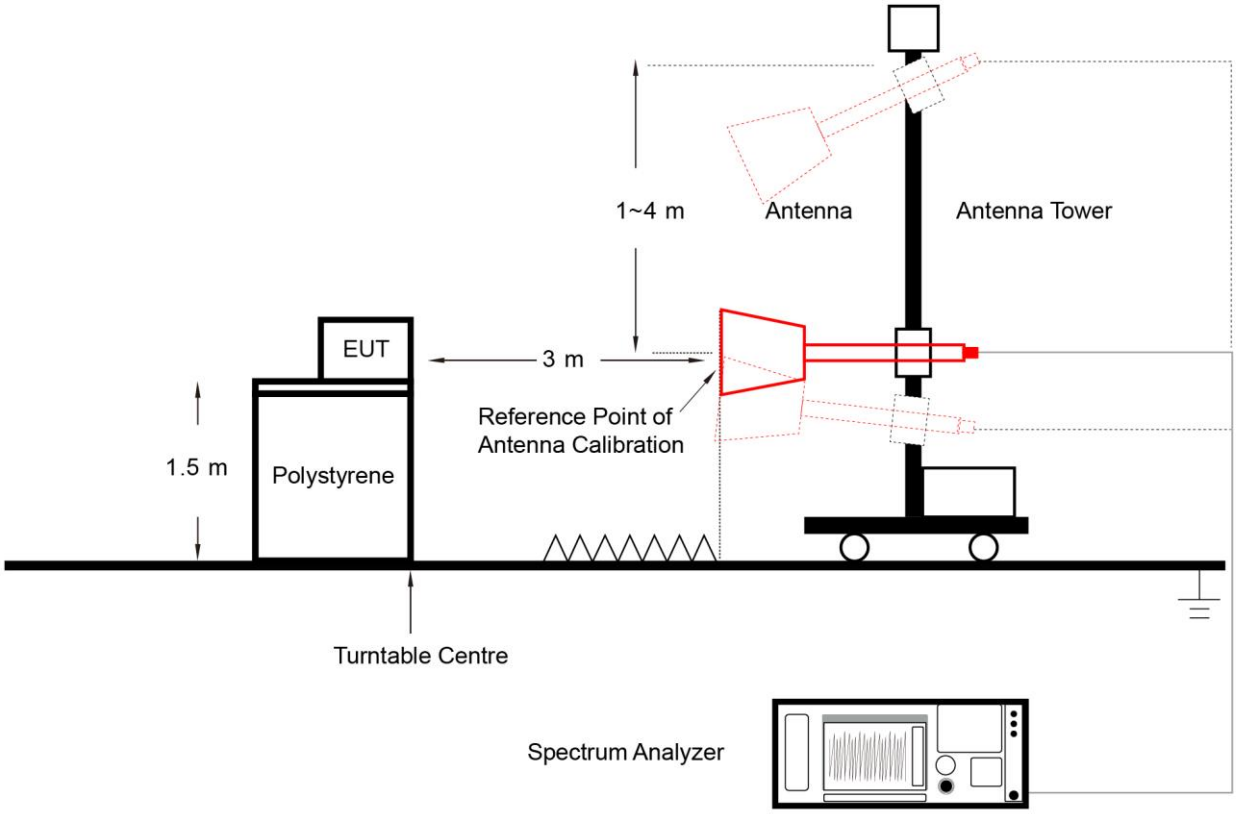
Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Average Field Strength Measurements

1. Average Measurement Level = Peak Measurement Level - 20 * Log(Duty Cycle) = -38.33
2. Duty Cycle = 1.21%(refer to ADXR Duty Cycle Report)

6.7.4. Test Setup



6.7.5. Test Result

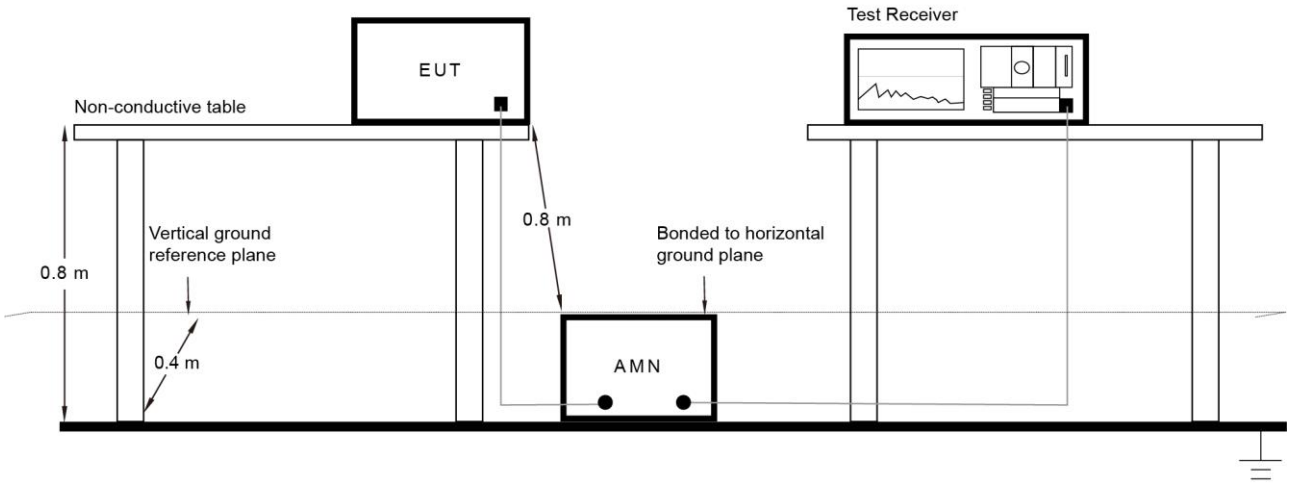
Refer to Appendix A.7.

6.8. AC Conducted Emissions Measurement

6.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.		

6.8.2. Test Setup



6.8.3. Test Result

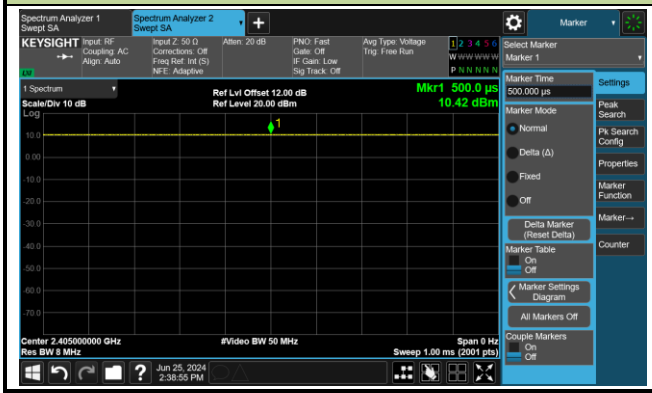
The EUT is powered by battery, so this item is not applicable.

Appendix A – Test Result

A.1 Duty Cycle Test Result

Test Site	WZ-SR5	Test Engineer	Liz Yuan
Test Date	2024-06-25		

Test Mode	Duty Cycle
802.15.4	100.00%

Duty Cycle	
802.15.4	
	

Note 1: This duty cycle was only suitable for continuous transmission of signals via commands.

Note 2: The ZigBee normal operation duty cycle = 1.21% (refer to ADXR Duty Cycle report), and the correction factor was used during peak and average band edge testing.

A.2 6dB Bandwidth Test Result

Test Site	WZ-SR5	Test Engineer	Liz Yuan
Test Date	2024-07-03		

Test Mode	Antenna	Modulation Mode	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.15.4	Ant B	O-QPSK	11	2405	1.191	≥ 0.5	Pass
802.15.4	Ant B	O-QPSK	18	2440	1.473	≥ 0.5	Pass
802.15.4	Ant B	O-QPSK	26	2480	1.623	≥ 0.5	Pass

802.15.4 6dB Bandwidth – Ant B

Channel 11 (2405MHz)

Channel 18 (2440MHz)

Channel 26 (2480MHz)

A.3 Output Power Test Result

Test Site	WZ-SR5	Test Engineer	Liz Yuan
Test Date	2024-07-23		

Test Result of Peak Output Power

Test Mode	Modulation Mode	Channel No.	Freq. (MHz)	Peak Power (dBm)		Limit (dBm)	Result
				Ant A	Ant B		
802.15.4	O-QPSK	11	2405	9.92	10.28	≤ 30.00	Pass
802.15.4	O-QPSK	18	2440	10.19	10.48	≤ 30.00	Pass
802.15.4	O-QPSK	26	2480	7.12	7.35	≤ 30.00	Pass

Test Result of Average Output Power (Reporting Only)

Test Mode	Modulation Mode	Channel No.	Freq. (MHz)	Average Power (dBm)		Limit (dBm)	Result
				Ant A	Ant B		
802.15.4	O-QPSK	11	2405	9.73	10.08	≤ 30.00	Pass
802.15.4	O-QPSK	18	2440	10.04	10.33	≤ 30.00	Pass
802.15.4	O-QPSK	26	2480	6.79	7.01	≤ 30.00	Pass

A.4 Power Spectral Density Test Result

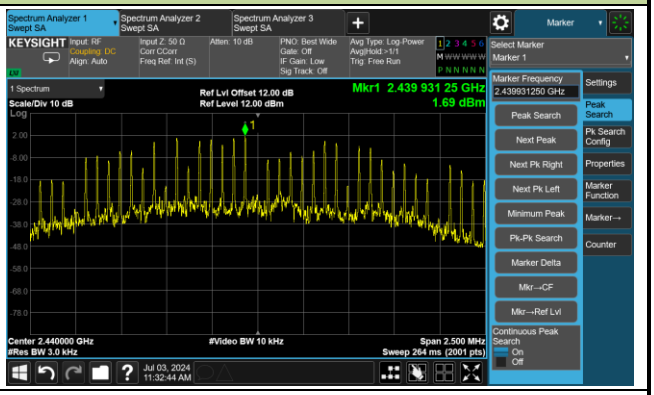
Test Site	WZ-SR5	Test Engineer	Liz Yuan
Test Date	2024-07-03 ~ 2024-07-23		

Test Mode	Antenna	Modulation Mode	Channel No.	Frequency (MHz)	PK PSD (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
802.15.4	Ant B	O-QPSK	11	2405	1.71	≤ 8.00	Pass
802.15.4	Ant B	O-QPSK	18	2440	1.69	≤ 8.00	Pass
802.15.4	Ant B	O-QPSK	26	2480	-2.67	≤ 8.00	Pass

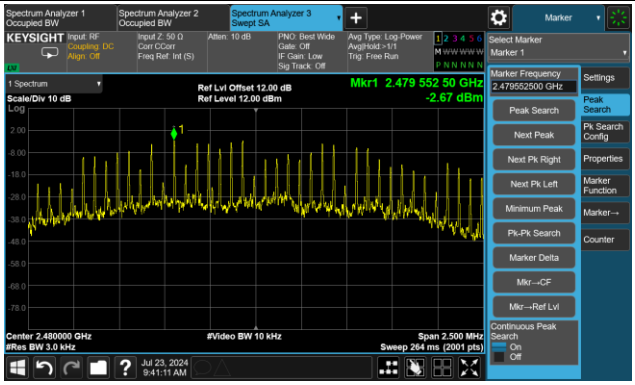
802.15.4 Power Density – Ant B

Channel 11 (2405MHz)

Channel 18 (2440MHz)



Channel 26 (2480MHz)



A.5 Conducted Band Edge and Out-of-Band Emissions Test Result

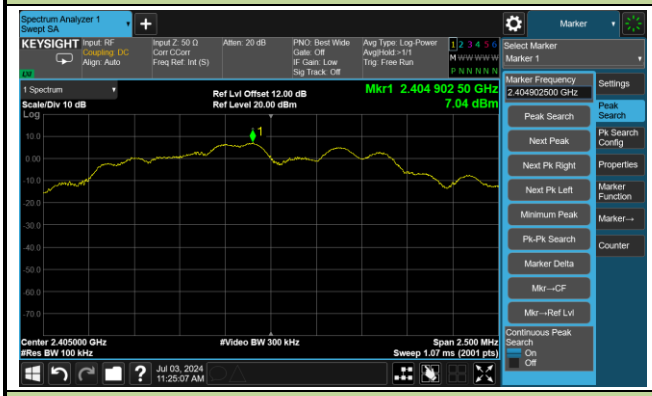
Test Site	WZ-SR5	Test Engineer	Liz Yuan
Test Date	2024-07-03 ~ 2024-07-23		

Test Mode	Antenna	Data Rate / MCS	Channel No.	Frequency (MHz)	Limit (dBc)	Result
802.15.4	Ant B	O-QPSK	11	2405	20	Pass
802.15.4	Ant B	O-QPSK	18	2440	20	Pass
802.15.4	Ant B	O-QPSK	26	2480	20	Pass

802.15.4 Out-of-Band Emissions – Ant B

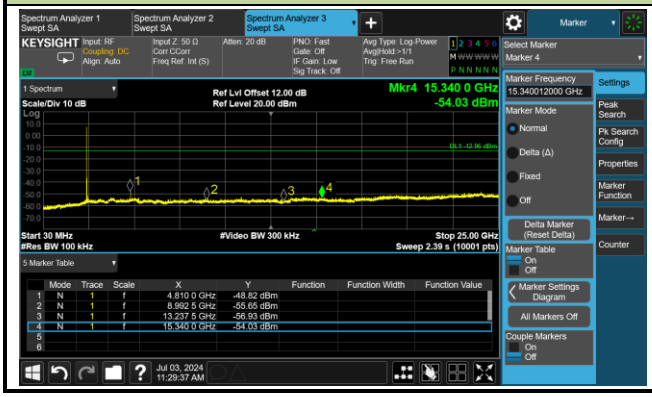
Channel 11 (2405MHz)

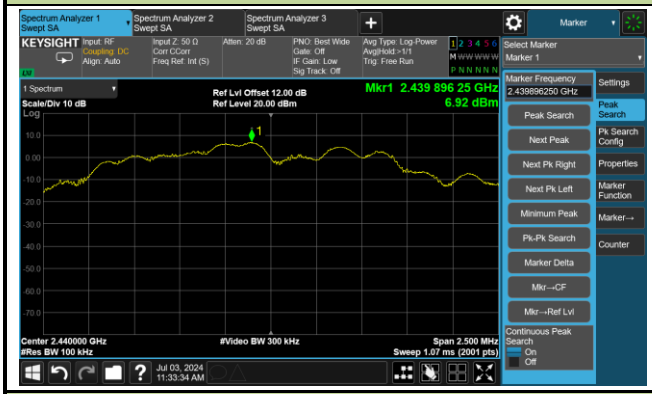
100kHz PSD Reference Level

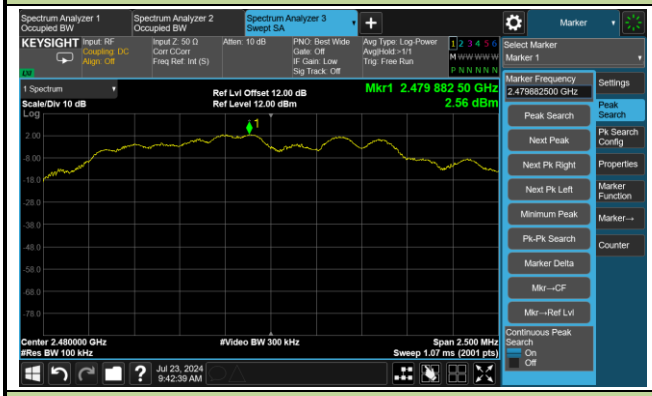
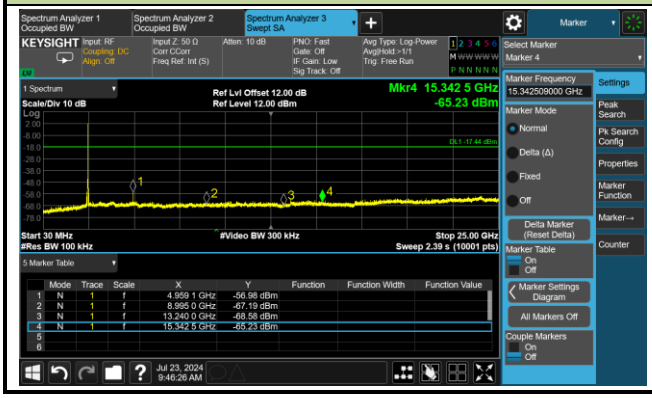


Low Band Edge

Spurious Emission



Channel 18 (2440MHz)	
100kHz PSD Reference Level	Spurious Emission
	

Channel 26 (2480MHz)	
100kHz PSD Reference Level	High Band Edge
	
Spurious Emission	
	

A.6 Radiated Spurious Emission Test Result

Test Site	WZ-AC2	Test Engineer	Bob Zhang
Test Date	2024-07-10 ~ 2024-07-22		
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Test Channel	Frequency (MHz)	Reading Level (dBμV)	Factor (dB/m)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
Ant A								
18	3893.4	37.6	0.2	37.8	74.0	-36.2	Peak	Horizontal
	4823.3	35.7	3.7	39.4	74.0	-34.6	Peak	Horizontal
	11431.2	32.0	17.1	49.1	74.0	-24.9	Peak	Horizontal
	3879.8	38.0	0.3	38.3	74.0	-35.7	Peak	Vertical
	4729.8	36.1	3.4	39.5	74.0	-34.5	Peak	Vertical
	11657.3	31.7	17.6	49.3	74.0	-24.7	Peak	Vertical
Ant B								
11	3869.6	36.9	0.3	37.2	74.0	-36.8	Peak	Horizontal
	4891.3	35.9	3.4	39.3	74.0	-34.7	Peak	Horizontal
	11157.5	30.4	16.7	47.1	74.0	-26.9	Peak	Horizontal
	4105.9	36.4	1.1	37.5	74.0	-36.5	Peak	Vertical
	4811.4	35.1	3.7	38.8	74.0	-35.2	Peak	Vertical
	11640.3	31.9	17.6	49.5	74.0	-24.5	Peak	Vertical
18	4112.7	37.2	1.1	38.3	74.0	-35.7	Peak	Horizontal
	4972.9	35.5	3.5	39.0	74.0	-35.0	Peak	Horizontal
	11300.3	32.8	16.8	49.6	74.0	-24.4	Peak	Horizontal
	3907.0	37.4	0.2	37.6	74.0	-36.4	Peak	Vertical
	4872.6	36.2	3.4	39.6	74.0	-34.4	Peak	Vertical
	11347.9	33.7	17.1	50.8	74.0	-23.2	Peak	Vertical
26	3893.4	37.2	0.2	37.4	74.0	-36.6	Peak	Horizontal
	4673.7	36.0	3.4	39.4	74.0	-34.6	Peak	Horizontal
	11584.2	32.0	17.2	49.2	74.0	-24.8	Peak	Horizontal
	3935.9	37.0	0.2	37.2	74.0	-36.8	Peak	Vertical
	4690.7	36.0	3.5	39.5	74.0	-34.5	Peak	Vertical
	11735.5	32.2	17.4	49.6	74.0	-24.4	Peak	Vertical

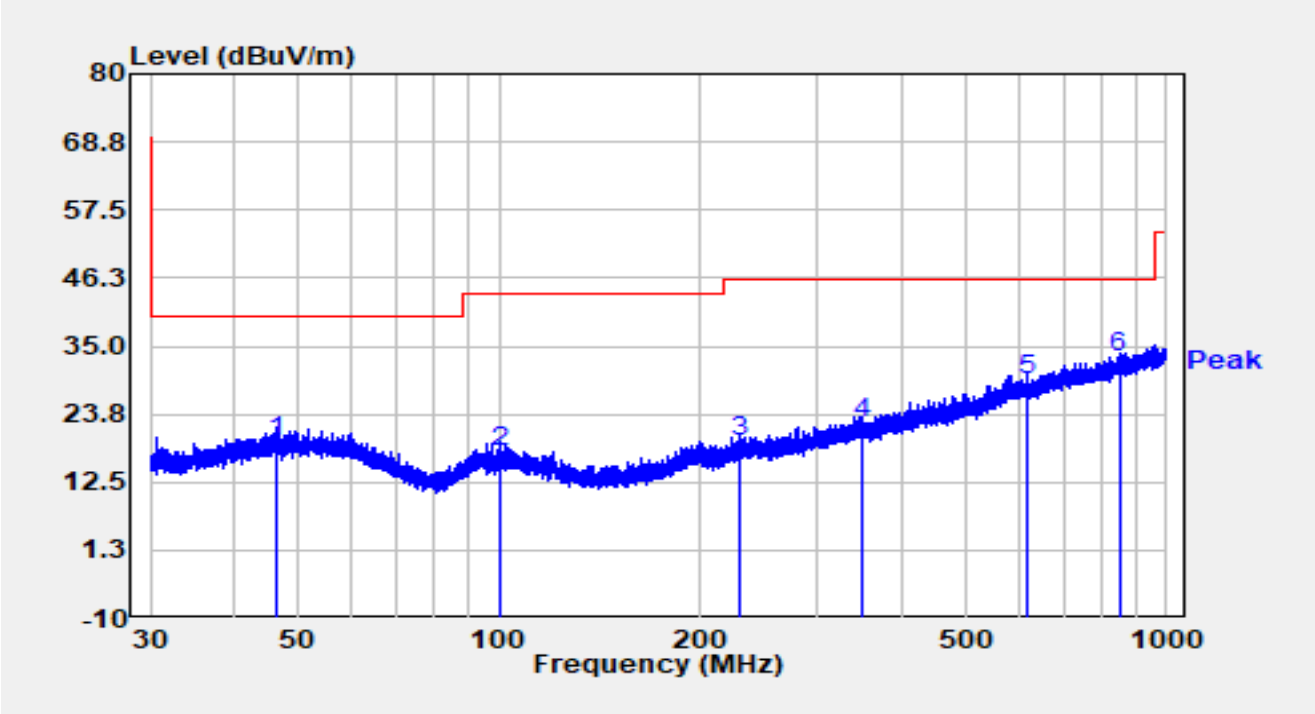
Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Result of Radiated Emission below 1GHz:

Antenna B

Site	WZ-AC2	Test Date	2024-07-22
Test Engineer	Bob Zhang	Temp./Humidity	25.5°C/46.4%
Factor	VULB 9162_30-7000MHz	Polarity	Horizontal
EUT	Wireless Bodypack Receiver	Test Voltage	By Battery
Test Mode	Transmit by Zigbee at 2440MHz		



No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		46.405	-1.05	20.38	19.33	-20.67	40.00	QP
2		99.983	-1.05	18.61	17.56	-25.94	43.50	QP
3		229.937	-0.47	19.52	19.04	-26.96	46.00	QP
4		349.986	-0.81	22.97	22.16	-23.84	46.00	QP
5		618.320	1.56	27.76	29.32	-16.68	46.00	QP
6	*	848.651	1.58	31.62	33.20	-12.80	46.00	QP

Notes:

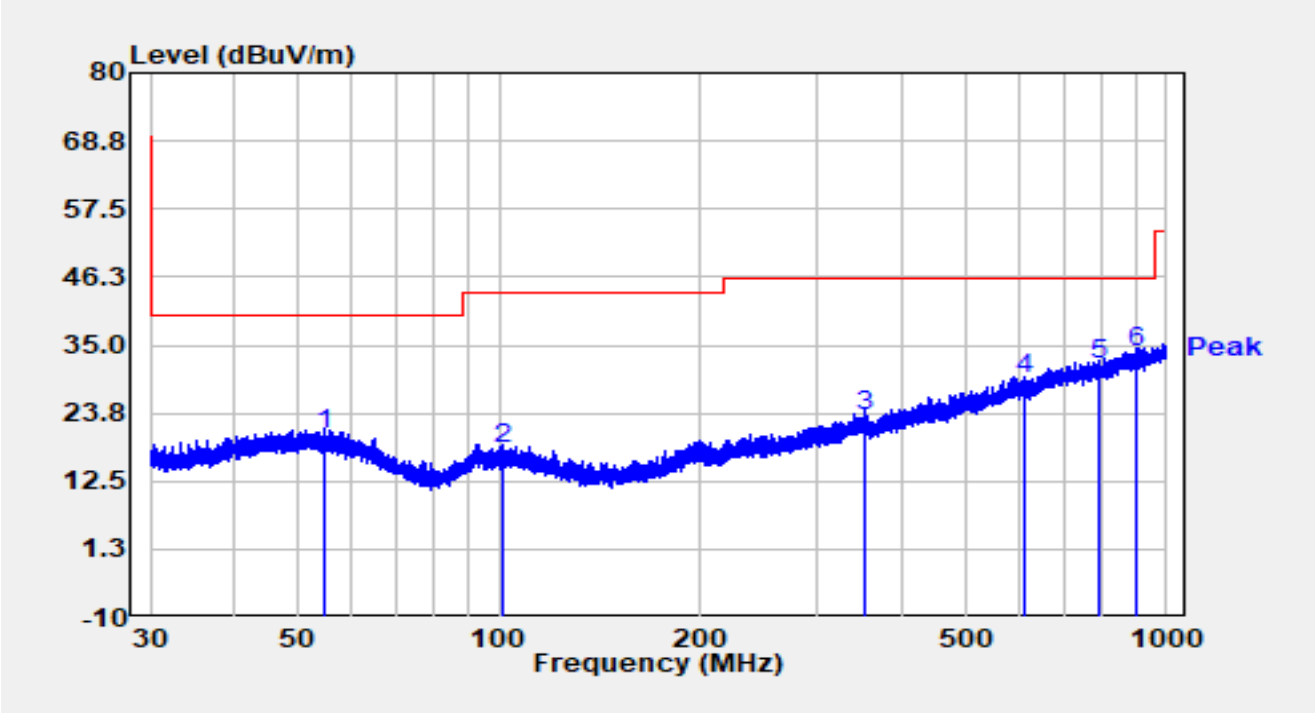
1. " *", means this data is the worst emission level.

2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).

3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site	WZ-AC2	Test Date	2024-07-22
Test Engineer	Bob Zhang	Temp./Humidity	25.5°C/46.4%
Factor	VULB 9162_30-7000MHz	Polarity	Vertical
EUT	Wireless Bodypack Receiver	Test Voltage	By Battery
Test Mode	Transmit by Zigbee at 2440MHz		



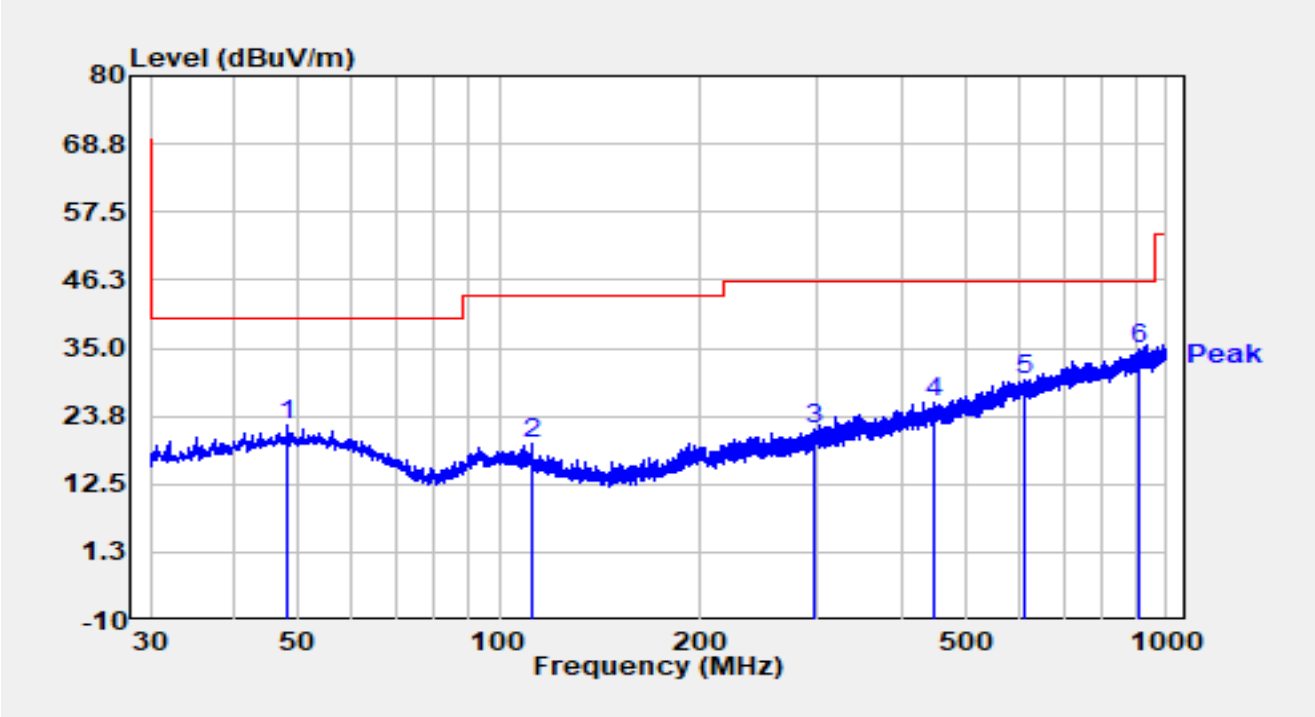
No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		54.720	-0.10	20.19	20.09	-19.91	40.00	QP
2		101.040	-0.84	18.64	17.81	-25.69	43.50	QP
3		352.820	0.65	22.80	23.45	-22.55	46.00	QP
4		614.214	1.45	27.82	29.28	-16.72	46.00	QP
5		790.342	1.26	30.56	31.82	-14.18	46.00	QP
6	*	897.941	1.87	31.99	33.87	-12.13	46.00	QP

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Antenna A

Site	WZ-AC2	Test Date	2024-07-22
Test Engineer	Bob Zhang	Temp./Humidity	25.5°C/46.4%
Factor	VULB 9162_30-7000MHz	Polarity	Horizontal
EUT	Wireless Bodypack Receiver	Test Voltage	By Battery
Test Mode	Transmit by Zigbee at 2440MHz		

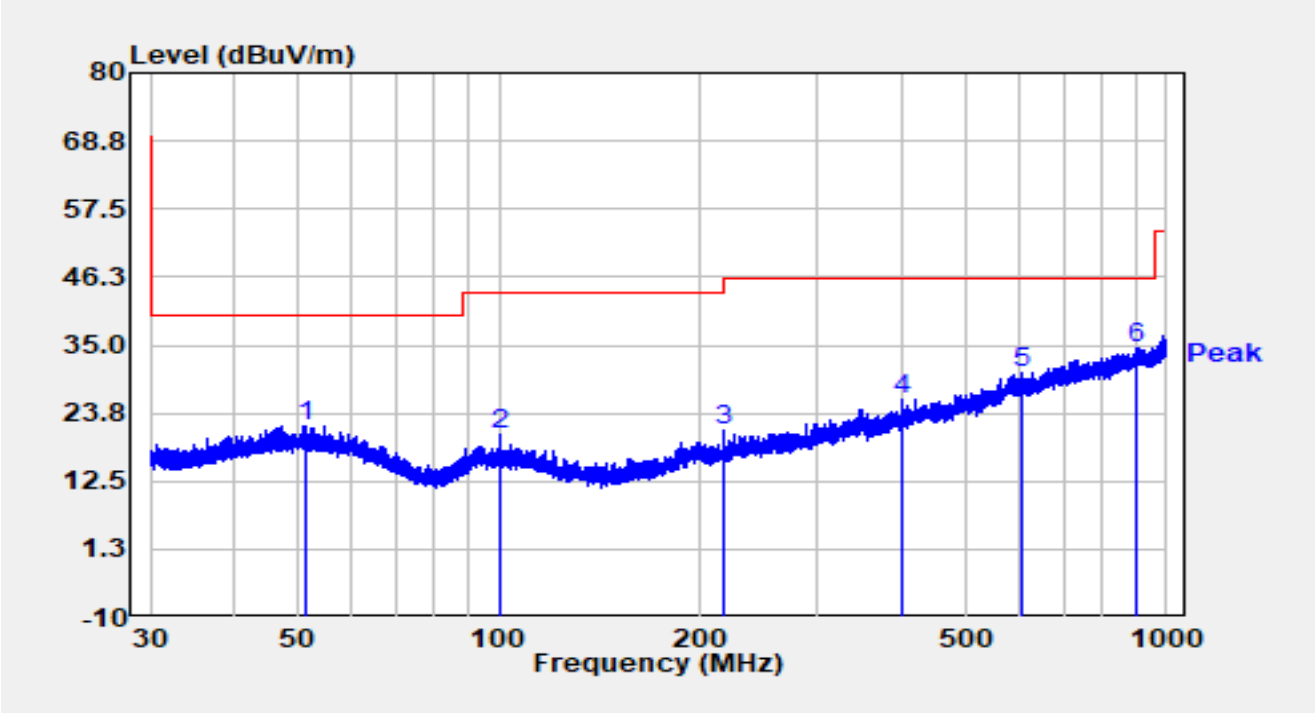


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		48.236	1.68	20.47	22.15	-17.85	40.00	QP
2		112.256	1.08	17.97	19.05	-24.45	43.50	QP
3		297.138	0.37	21.14	21.50	-24.50	46.00	QP
4		449.234	1.71	24.34	26.05	-19.95	46.00	QP
5		614.619	1.81	27.82	29.63	-16.37	46.00	QP
6	*	905.425	2.54	32.14	34.68	-11.32	46.00	QP

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site	WZ-AC2	Test Date	2024-07-22
Test Engineer	Bob Zhang	Temp./Humidity	25.5°C/46.4%
Factor	VULB 9162_30-7000MHz	Polarity	Vertical
EUT	Wireless Bodypack Receiver	Test Voltage	By Battery
Test Mode	Transmit by Zigbee at 2440MHz		



No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Limit (dBμV/m)	Detector
1		51.103	1.18	20.47	21.65	-18.35	40.00	QP
2		100.299	1.66	18.62	20.28	-23.22	43.50	QP
3		217.392	2.04	18.84	20.87	-25.13	46.00	QP
4		402.120	2.37	23.68	26.05	-19.95	46.00	QP
5		608.427	2.47	27.86	30.33	-15.67	46.00	QP
6	*	900.779	2.45	32.06	34.51	-11.49	46.00	QP

Notes:

1. " *", means this data is the worst emission level.

2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).

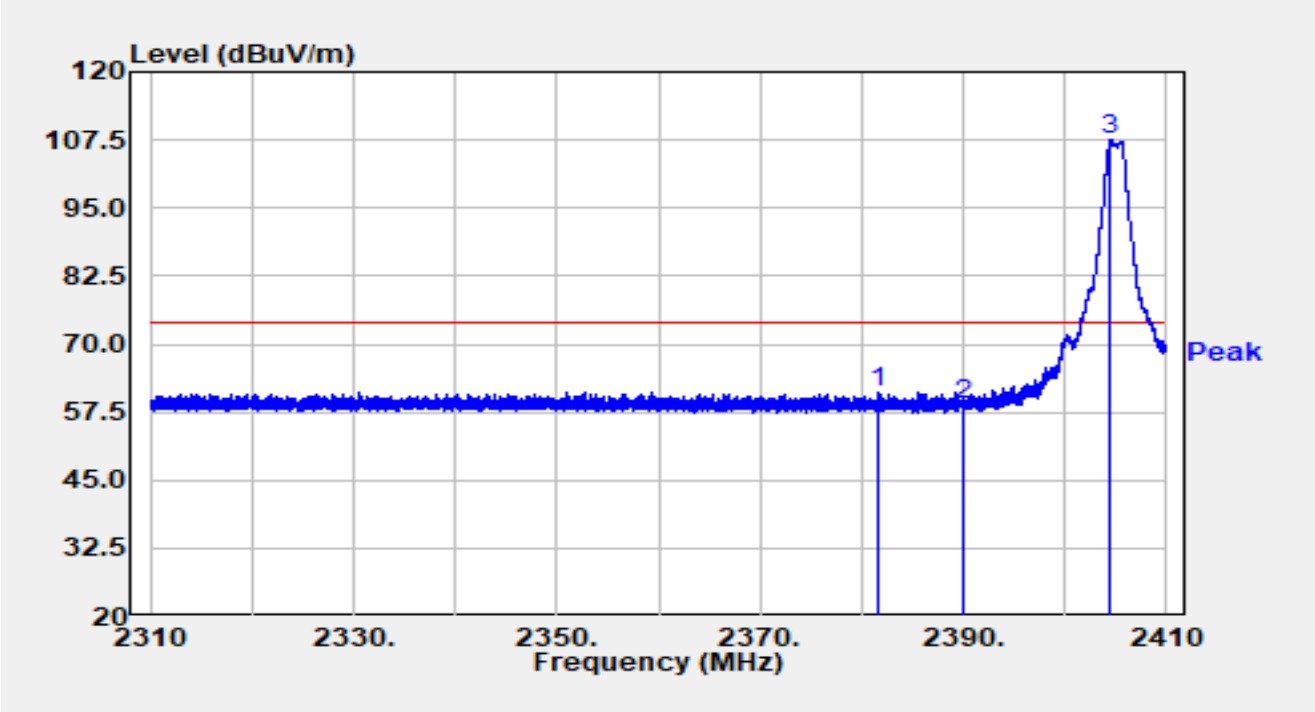
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).

4. The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

A.7 Radiated Restricted Band Edge Test Result

Antenna B

Site	WZ-AC2	Test Date	2024-07-10
Test Engineer	Bob Zhang	Temp./Humidity	25.5°C/46.4%
Factor	BBHA 9120D_1457_1-18GHz	Polarity	Horizontal
EUT	Wireless Bodypack Receiver	Test Voltage	By Battery
Test Mode	Transmit by Zigbee at 2405MHz		

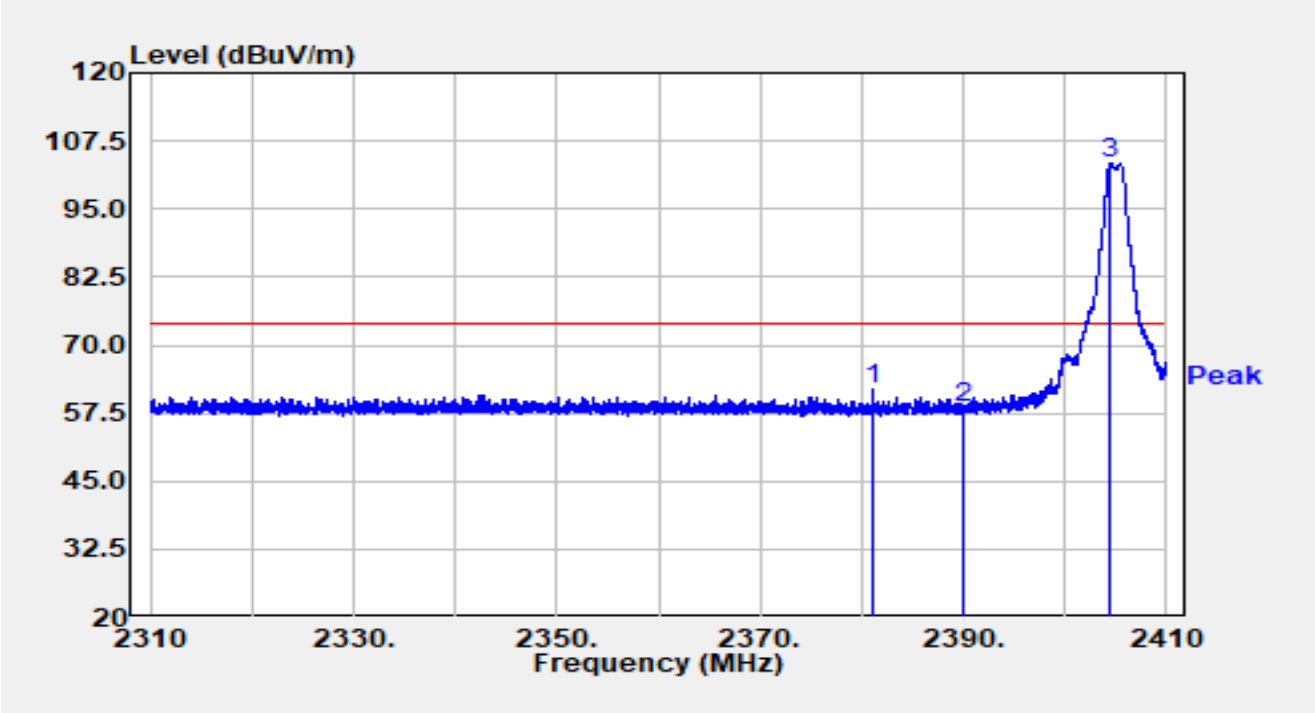


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Duty cycle Factor (dB)	Limit (dBμV/m)	Detector
1	*	2381.620	28.76	32.56	61.32	-12.68	N/A	74.00	Peak
		2381.620	28.76	32.56	22.99	-31.01	-38.33	54.00	Average
2		2390.000	26.33	32.53	58.86	-15.14	N/A	74.00	Peak
		2390.000	26.33	32.53	20.52	-33.47	-38.33	54.00	Average
3		2404.530	74.88	32.48	107.37	N/A	N/A	N/A	Peak
		2404.530	74.88	32.48	69.04	N/A	-38.33	N/A	Average

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
4. Average Measure Level = Peak Measure Level + Duty Cycle Factor, Duty Cycle Factor = -38.33dB.

Site	WZ-AC2	Test Date	2024-07-10
Test Engineer	Bob Zhang	Temp./Humidity	25.5°C/46.4%
Factor	BBHA 9120D_1457_1-18GHz	Polarity	Vertical
EUT	Wireless Bodypack Receiver	Test Voltage	By Battery
Test Mode	Transmit by Zigbee at 2405MHz		

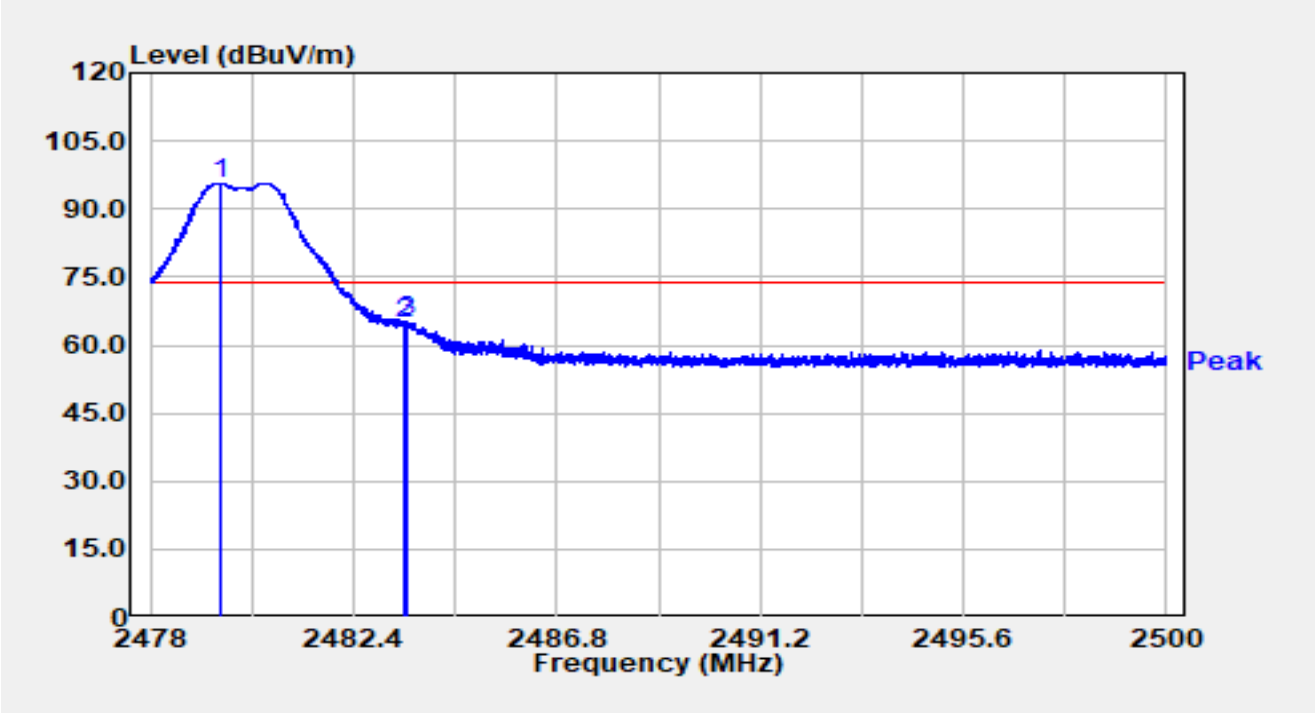


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Duty cycle Factor (dB)	Limit (dBμV/m)	Detector
1	*	2381.070	29.36	32.56	61.92	-12.08	N/A	74.00	Peak
		2381.070	29.36	32.56	23.59	-30.41	-38.33	54.00	Average
2		2390.000	26.08	32.53	58.60	-15.40	N/A	74.00	Peak
		2390.000	26.08	32.53	20.27	-33.73	-38.33	54.00	Average
3		2404.510	70.94	32.48	103.42	N/A	N/A	N/A	Peak
		2404.510	70.94	32.48	65.09	N/A	-38.33	N/A	Average

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
4. Average Measure Level = Peak Measure Level + Duty Cycle Factor, Duty Cycle Factor = -38.33dB.

Site	WZ-AC2	Test Date	2024-07-17
Test Engineer	Bob Zhang	Temp./Humidity	25.5°C/46.4%
Factor	BBHA 9120D_1457_1-18GHz	Polarity	Horizontal
EUT	Wireless Bodypack Receiver	Test Voltage	By Battery
Test Mode	Transmit by Zigbee at 2480MHz		

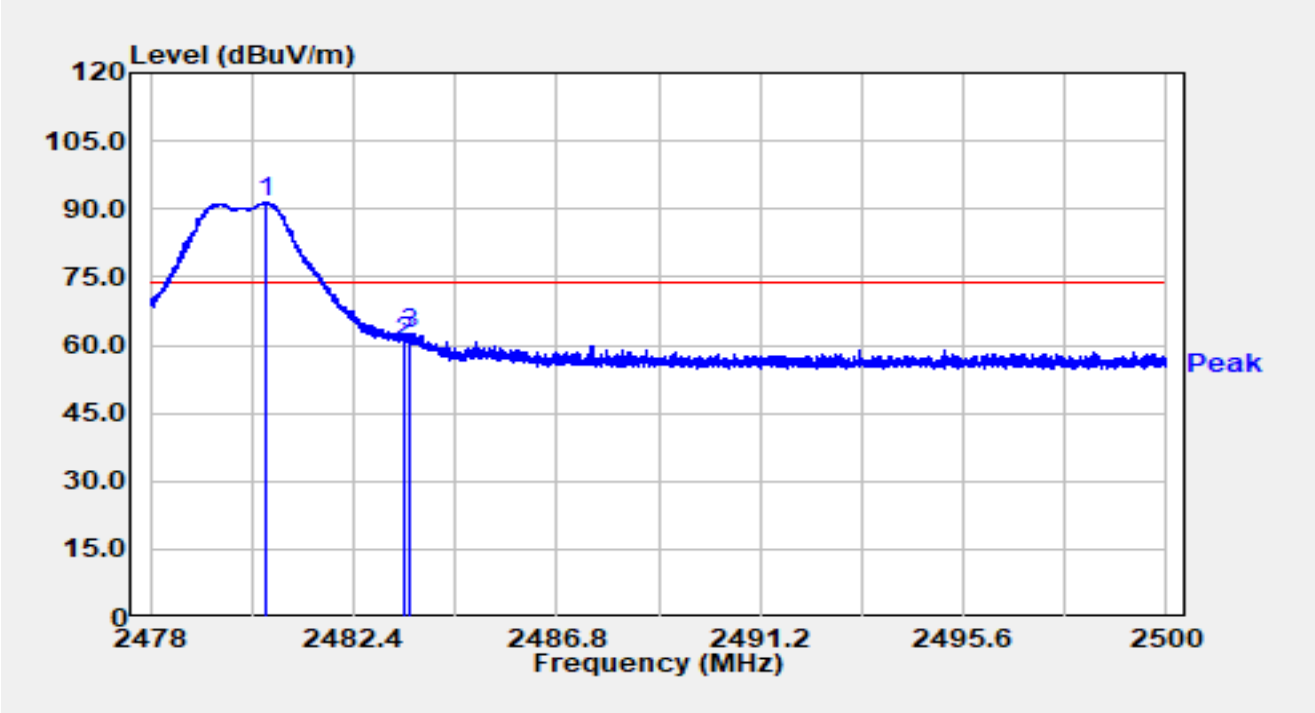


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Duty cycle Factor (dB)	Limit (dBμV/m)	Detector
1		2479.514	63.30	32.38	95.69	N/A	N/A	N/A	Peak
		2479.514	63.30	32.38	57.36	N/A	-38.33	N/A	Average
2		2483.500	32.31	32.38	64.69	-9.31	N/A	74.00	Peak
		2483.500	32.31	32.38	26.36	-27.64	-38.33	54.00	Average
3	*	2483.546	32.93	32.38	65.31	-8.69	N/A	74.00	Peak
		2483.546	32.93	32.38	26.98	-27.02	-38.33	54.00	Average

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
4. Average Measure Level = Peak Measure Level + Duty Cycle Factor, Duty Cycle Factor = -38.33dB.

Site	WZ-AC2	Test Date	2024-07-17
Test Engineer	Bob Zhang	Temp./Humidity	25.5°C/46.4%
Factor	BBHA 9120D_1457_1-18GHz	Polarity	Vertical
EUT	Wireless Bodypack Receiver	Test Voltage	By Battery
Test Mode	Transmit by Zigbee at 2480MHz		



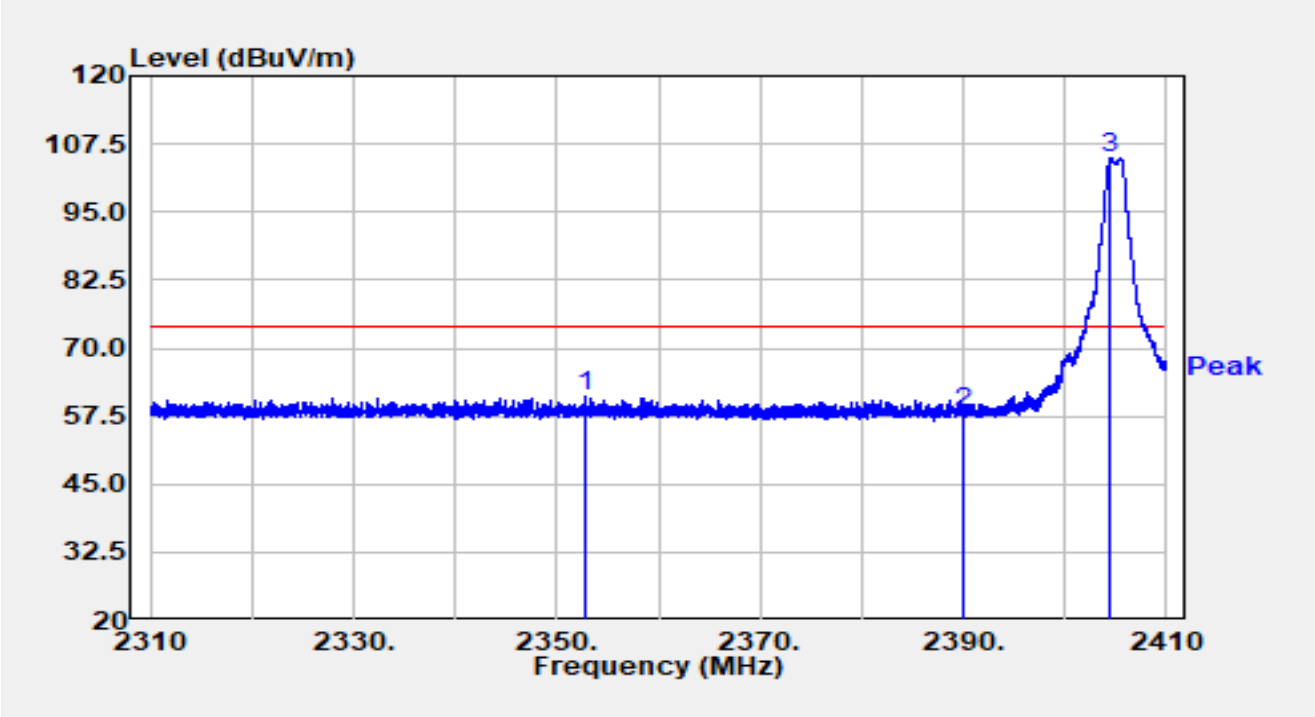
No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Duty cycle Factor (dB)	Limit (dBμV/m)	Detector
1		2480.501	58.92	32.38	91.30	N/A	N/A	N/A	Peak
		2480.501	58.92	32.38	52.97	N/A	-38.33	N/A	Average
2		2483.500	28.51	32.38	60.89	-13.11	N/A	74.00	Peak
		2483.500	28.51	32.38	22.56	-31.44	-38.33	54.00	Average
3	*	2483.636	30.21	32.38	62.60	-11.40	N/A	74.00	Peak
		2483.636	30.21	32.38	24.27	-29.73	-38.33	54.00	Average

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
4. Average Measure Level = Peak Measure Level + Duty Cycle Factor, Duty Cycle Factor = -38.33dB.

Antenna A

Site	WZ-AC2	Test Date	2024-07-10
Test Engineer	Bob Zhang	Temp./Humidity	25.5°C/46.4%
Factor	BBHA 9120D_1457_1-18GHz	Polarity	Horizontal
EUT	Wireless Bodypack Receiver	Test Voltage	By Battery
Test Mode	Transmit by Zigbee at 2405MHz		

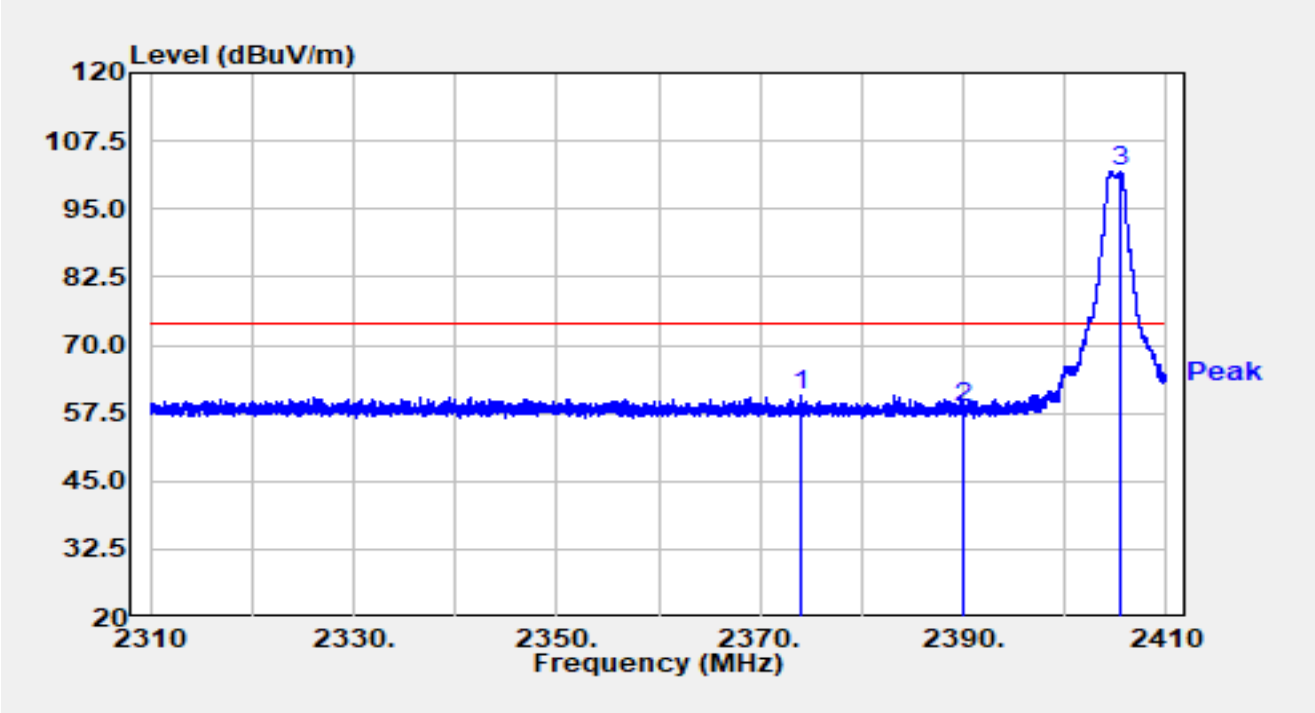


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Duty cycle Factor (dB)	Limit (dBμV/m)	Detector
1	*	2352.890	28.44	32.75	61.19	-12.81	N/A	74.00	Peak
		2352.890	28.44	32.75	22.86	-31.14	-38.33	54.00	Average
2		2390.000	25.69	32.53	58.21	-15.79	N/A	74.00	Peak
		2390.000	25.69	32.53	19.88	-34.12	-38.33	54.00	Average
3		2404.480	72.38	32.48	104.86	N/A	N/A	N/A	Peak
		2404.480	72.38	32.48	66.53	N/A	-38.33	N/A	Average

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
4. Average Measure Level = Peak Measure Level + Duty Cycle Factor, Duty Cycle Factor = -38.33dB.

Site	WZ-AC2	Test Date	2024-07-10
Test Engineer	Bob Zhang	Temp./Humidity	25.5°C/46.4%
Factor	BBHA 9120D_1457_1-18GHz	Polarity	Vertical
EUT	Wireless Bodypack Receiver	Test Voltage	By Battery
Test Mode	Transmit by Zigbee at 2405MHz		

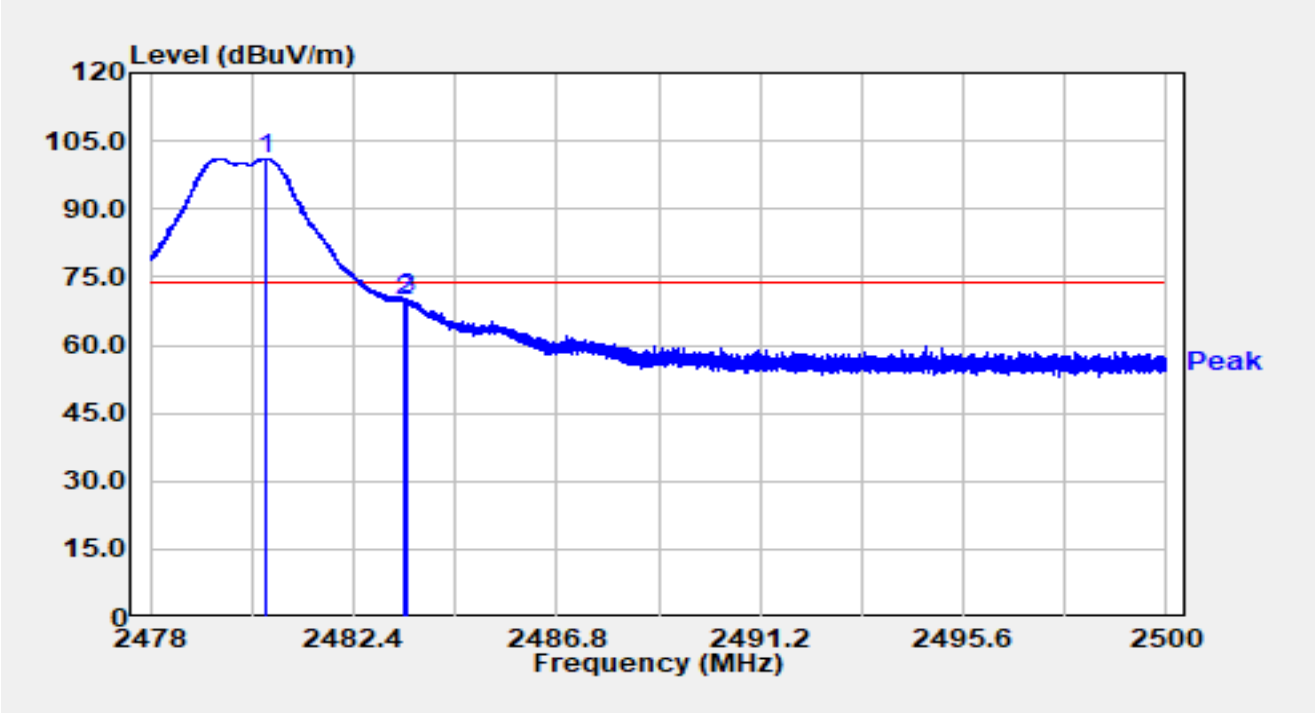


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Duty cycle Factor (dB)	Limit (dBμV/m)	Detector
1	*	2373.980	28.10	32.60	60.70	-13.30	N/A	74.00	Peak
		2373.980	28.10	32.60	22.37	-31.63	-38.33	54.00	Average
2		2390.000	26.11	32.53	58.64	-15.36	N/A	74.00	Peak
		2390.000	26.11	32.53	20.31	-33.69	-38.33	54.00	Average
3		2405.450	69.47	32.48	101.95	N/A	N/A	N/A	Peak
		2405.450	69.47	32.48	63.62	N/A	-38.33	N/A	Average

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
4. Average Measure Level = Peak Measure Level + Duty Cycle Factor, Duty Cycle Factor = -38.33dB.

Site	WZ-AC2	Test Date	2024-07-17
Test Engineer	Bob Zhang	Temp./Humidity	25.5°C/46.4%
Factor	BBHA 9120D_1457_1-18GHz	Polarity	Horizontal
EUT	Wireless Bodypack Receiver	Test Voltage	By Battery
Test Mode	Transmit by Zigbee at 2480MHz		

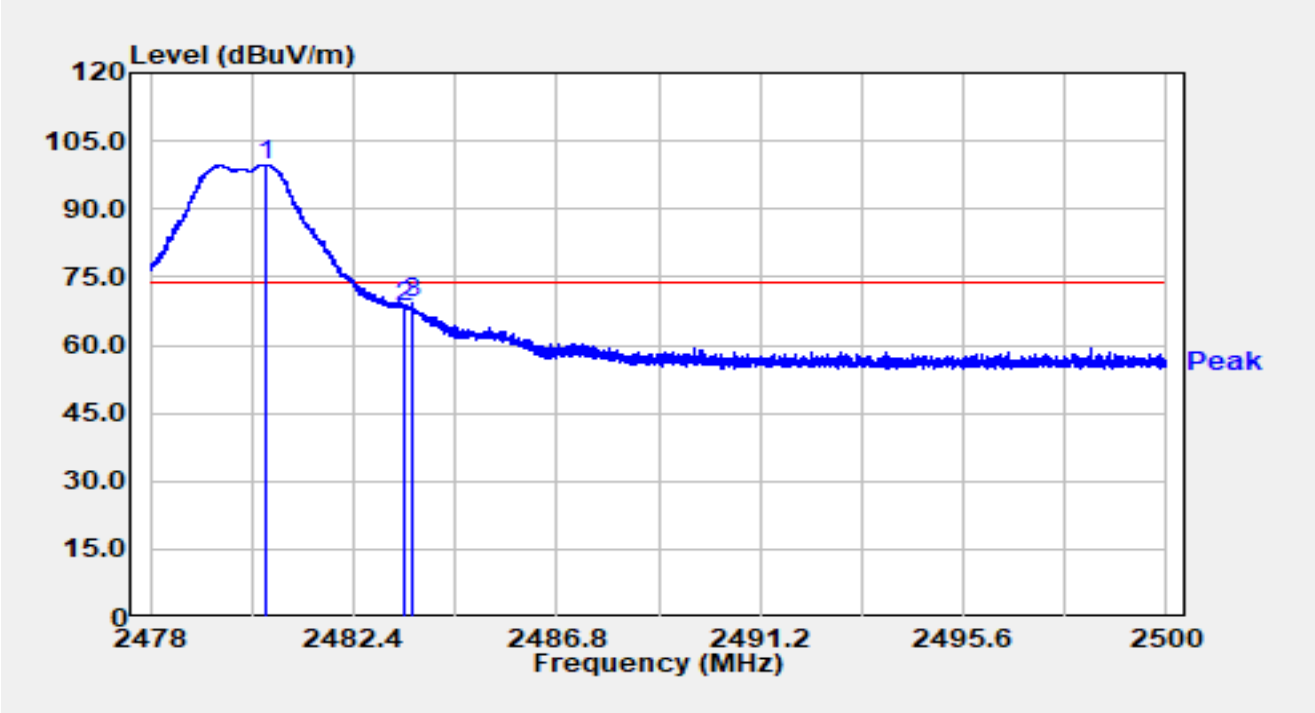


No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Duty cycle Factor (dB)	Limit (dBμV/m)	Detector
1		2480.495	68.63	32.38	101.01	N/A	N/A	N/A	Peak
		2480.495	68.63	32.38	62.68	N/A	-38.33	N/A	Average
2		2483.500	37.38	32.38	69.76	-4.24	N/A	74.00	Peak
		2483.500	37.38	32.38	31.43	-22.57	-38.33	54.00	Average
3	*	2483.579	37.90	32.38	70.28	-3.72	N/A	74.00	Peak
		2483.579	37.90	32.38	31.95	-22.05	-38.33	54.00	Average

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
4. Average Measure Level = Peak Measure Level + Duty Cycle Factor, Duty Cycle Factor = -38.33dB.

Site	WZ-AC2	Test Date	2024-07-17
Test Engineer	Bob Zhang	Temp./Humidity	25.5°C/46.4%
Factor	BBHA 9120D_1457_1-18GHz	Polarity	Vertical
EUT	Wireless Bodypack Receiver	Test Voltage	By Battery
Test Mode	Transmit by Zigbee at 2480MHz		



No	Mark	Frequency (MHz)	Reading (dBμV)	C.F (dB/m)	Measurement (dBμV/m)	Margin (dB)	Duty cycle Factor (dB)	Limit (dBμV/m)	Detector
1		2480.477	67.35	32.38	99.74	N/A	N/A	N/A	Peak
		2480.477	67.35	32.38	61.41	N/A	-38.33	N/A	Average
2		2483.500	35.96	32.38	68.34	-5.66	N/A	74.00	Peak
		2483.500	35.96	32.38	30.01	-23.99	-38.33	54.00	Average
3	*	2483.656	36.68	32.38	69.06	-4.94	N/A	74.00	Peak
		2483.656	36.68	32.38	30.73	-23.27	-38.33	54.00	Average

Notes:

1. " *", means this data is the worst emission level.
2. C.F (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB).
3. Measurement (dBμV/m) = Reading (dBμV) + C.F (dB/m).
4. Average Measure Level = Peak Measure Level + Duty Cycle Factor, Duty Cycle Factor = -38.33dB.

Appendix B – Test Setup Photograph

Refer to “2405RSU017-UT” file.

Appendix C – EUT Photograph

Refer to “2405RSU017-UE” file.

The End